

DETAILED ACTION

Election/Restrictions

Applicant's election of group I, claims 1-71, in the reply filed on 9/25/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12, 15, 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12 and 18 contain the trademark/trade name Pluronic®.

Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present

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case, the trademark/trade name is used to identify/describe a material used as a surfactant and, accordingly, the identification/description is indefinite.

Claims 15 and 19 contain the trademark/trade name Tween®. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a material used as a coating and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8, 10, 11, 14, 15, 20 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mohanraj (7,249,604).

Claims 1, 2, and 4 - a magnetic fluid is set forth in column 3 lines 35-38, the magnetic fluid is inserted to the vessel through a catheter and an exterior magnet creates a magnetic field to form a plug and block blood flow, column 3 lines 25-65. The blockages are used to impede the oxygen supply to cells and create hypoxic cells, column 9, lines 63-67.

Claim 3 - the location of the blockage is determined by the user based on the intended use. It is the examiners position that the plug would inherently be formed adjacent the non-hypoxic cells.

Claim 5 - the magnetic field is generated by a rare earth magnet or an electromagnet among others, column 5 lines 50-58.

Claim 6 - coated particles are set forth in column 5 lines 31-41.

Claims 8 and 10 - the microparticles range in size from .01 to 2000 micrometers, column 5 lines 23-30.

Claim 11 - the use of ferromagnetic material is set forth in column 5 lines 31-41 and iron is clearly a ferromagnetic material.

Claim 14 the coating may be a polymer, column 5 line 43.

Claim 15 - polyethylene glycol is set forth in column 6 line 28.

Claim 20 - the magnetic particles are delivered as a dispersion, column 3 lines 36/37, such a dispersion would inherently require a carrier fluid.

Claim 24 - every conceivable shape is included in the claim language therefor the material inherently has the claimed shapes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mohanraj (7,249,604) in view of Krishnan et al (6,582,429, hereinafter Krishnan).

Mohanraj teaches a device as claimed but does not teach the specific surfactants claimed, polyethylene glycol is set forth, column 6 lines 23-30. Krishnan teaches a medical device inserted into the body prepared with a plurality of surfactants including polyethylene glycol and polyethylene oxide, column 6 lines 19-21. It would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to use polyethylene oxide in place of polyethylene glycol set forth in Mohanraj as a substitution of functionally equivalent elements as shown by Krishnan.

Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohanraj (7,249,604) in view of Zhou et al (abstract only, hereinafter Zhou).

Mohanraj teaches a nanoparticle with core which may be iron and a single coating formed from a polymer but does not set forth a plurality of layers of coatings. It is old and well known in the medical arts that iron nanoelements are unstable in air and by coating the particles with gold will protect the particle. It

would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to apply a gold coating to the iron core prior to applying the surfactant to the nanoparticle of Mohanraj to protect the iron core as is known in the arts as taught by Zhou.

Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohanraj (7,249,604).

Claims 21 and 22 - Mohanraj teaches a method as claimed but does not set forth specifics of the carrier fluid. The examiner is taking official notice that saline is an old and well known carrier fluid in the medical arts. It would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to use saline for the carrier fluid required by Mohanraj as an ordinary design expedient to a practitioner in the medical arts.

Claim 23 - the percentage of core particles are not set forth in Mohanraj. The percentage is generally selected by one of ordinary skill in the art to adjust the viscosity of the material to be delivered to the patient. An appropriate viscosity is required to allow the material to be passed through the delivery catheter or needle. The selection of an appropriate percentage between 0 and 100% would have been obvious to one of ordinary skill in the medical arts in view of the limited number of percentages and knowing that the percentages are adjustable to determine the viscosity of the material to be delivered the lower the percentage the lower the viscosity will be and the easier it will be to deliver the material.

Allowable Subject Matter

Claims 25 and 47-49 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach a method as claimed including administering a magnetic fluid through a blood vessel feeding a tumor and applying a magnetic field adjacent the tumor to form a blockage impeding blood flow and inducing hypoxia in a region of the tumor, claims 25 and 47.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6,364,823 and 4,364,377 teach related magnetic devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Gilbert whose telephone number is 571-272-4725. The examiner can normally be reached on Monday-Friday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571-272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel G. Gilbert/
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